

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of )  
 )  
Allocation of Spectrum in the 5 GHz Band ) RM-8653  
To Establish a Wireless Component of the )  
National Information Infrastructure )

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In the Matter of )  
 )  
Petition for Rulemaking to Allocate ) RM-8648  
the 5.1 - 5.35 GHz Band and Adopt )  
Service Rules for a Shared Unlicensed )  
Personal Radio Network )

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COMMENTS OF JOHN HUMPHREY

I wish to submit these comments to the petition for rulemaking filed by Apple Computer, Inc. ("NII Band Petition"), and by the Wireless Information Networks Forum ("WINForum Petition"), in the above referenced matters. I am filing as an individual citizen who uses the Internet and I am very concerned with technological trends and communications breakthroughs.

In my opinion, the NII Band petition represents a way for the general public to participate in the communications revolution that has been exclusive playing field of Ham radio for so many years. If things proceed as hoped, we will be at a point where communications and computing technologies will be available without regard to geography, income level, educational level, or organizational size to everyone in the United States.

Schools, colleges and universities must have access to advanced communications and computing technologies if they are to prepare our students to participate fully in, and contribute to, tomorrow's information-based economy. The recent recognition of the growth of the world-wide Internet has brought home to many that there is an increasing requirement for access to technologies that are broadband (capable of supporting, for example, videoconferencing and multimedia applications), flexible (capable of being used efficiently to maximize the benefits of limited resources), and affordable (capable of being installed and used on the budgets available to the average American).

If our society's communications needs are ever to be fulfilled, new options must be explored. One such option of note is the Part 15 unlicensed service. Since the rules for this service went into effect in 1985, the success of Part 15 unlicensed technologies has far exceeded the early expectations of many. Today, we see a market for these technologies that is comprised of millions of devices, hundreds of applications, scores of different technologies, and an untold number of dollars in investment. The experience that we all have seen with this service should serve as a useful platform to use for building the new NII Band.

As Apple notes in its petition there are problems with the Part 15 service as it is now. The unlicensed technologies are subject to certain constraints that will inhibit them from satisfying the growing need for wireless communications services. Under the Commission's rules, these devices must not cause interference to other non-Part 15 users of the spectrum that they share and they are not

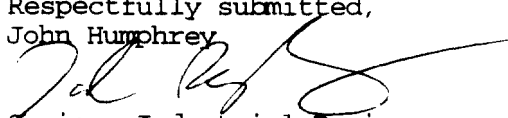
themselves protected from interference. As a result, many advanced applications, and those requiring extremely high reliability, have so far remained tethered to wireline services. As these technologies become more sophisticated and ubiquitous, this lack of interference protection will become more critical. This condition calls all the more for the creation of the NII Band which I feel will address most of the problems of today's Part 15 unlicensed service and provide a workable solution.

As I have said, the rules governing the operation of the NII Band should be broad enough to encompass a wide variety of wireless devices. While very high speed devices may be necessary for the implementation of certain technologies and communications methods, their use in the NII Band should not be required so as to foreclose the band to other technologies. For this reason, I feel that the petition filed by Apple is far superior to that of WINForum. It appears to me that the WINForum petition favors rules that will restrict the technologies used in the NII Band towards the European HIPERLAN standards. In my opinion, the Apple petition proposes an allocation and usage approach that while accommodating the requirements of HIPERLAN, would also foster the development of new and more innovative technologies. Further, the rules proposed by Apple would assure that all devices retain an equitable right to access and share the spectrum resources. Such equitable access is necessary for at least two reasons. First, service rules that favor certain configurations or technologies will bias future development efforts towards those configurations and technologies and will therefore limit the scope of innovations possible in this band. If any one type of transmission method is given priority in the band, then many of the advantages of this new service will be lost. Experience in the Part 15 bands clearly demonstrates that technology will adapt to the spectrum environment as it finds it. As long as the service rules provide for an even "playing field", a multitude of different services using this band will thrive and any artificial regulatory "slights of hand" by the Commission will be unnecessary.

In conclusion, it is my feeling that the NII Band petition provide the basis for a great public experiment which if successful will provide one of the cornerstones for the proposed National Information Infrastructure (NII). The important principles embodied in the Apple petition should guide the Commission in creating an NII Band, particularly if it is to employ spectrum at 5725-5875 MHz in which both Part 15 and ARS technologies are currently being developed and deployed. The combination of adequate spectrum and efficient pragmatic spectrum sharing rules should create an environment in which this new service with its innovative technologies could thrive.

For the reasons stated herein, I wish to support the petition for rulemaking filed by Apple Computer, Inc.

Respectfully submitted,  
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